

TYPE OR PRINT
IN BLACK INK
(For instructions, see
booklet: "How to File an
Application to Appropriate
Water in California")



California Environmental Protection Agency

State Water Resources Control Board
Division of Water Rights
P.O. Box 2000, Sacramento, CA 95812-2000
Tel: (916) 341-5300 Fax: (916) 341-5400
www.waterrights.ca.gov

APPLICATION NO. A031620

(leave blank)

APPLICATION TO APPROPRIATE WATER

SECTION A: NOTICE INFORMATION

1. APPLICANT/AGENT

a.

| | APPLICANT | ASSIGNED AGENT (if any) |
|-------------------|----------------------|------------------------------|
| Name | Norm Shinabargar | Wagner & Bonsignore |
| Mailing Address | 2720 Reibli Road | 444 North Third Street, #325 |
| City, State & Zip | Santa Rosa, CA 95404 | Sacramento, CA 95814 |
| Telephone | (707) 539-1552 | (916) 441-6850 |
| Fax | | (916) 448-3866 |
| E-mail | | ryans@wagner-engrs.com |

2. OWNERSHIP INFORMATION (Please check type of ownership.)

- ☒ Sole Owner ☐ Limited Liability Company (LLC) ☐ General Partnership*
☐ Limited Partnership* ☐ Business Trust ☐ Husband/Wife Co-Ownership
☐ Corporation ☐ Joint Venture ☐ Other _____

*Please provide a copy of your partnership agreement.

3. PROJECT DESCRIPTION (Provide a detailed description of your project, including, but not limited to, type of construction activity, area to be graded or excavated, and how the water will be used.)

☒ For continuation, see Attachment No. 1

4. PURPOSE OF USE, DIVERSION/STORAGE AMOUNT AND SEASON

| a. PURPOSE OF USE (irrigation, domestic, etc.) | DIRECT DIVERSION | | | | STORAGE | | |
|--|-----------------------|-----------------------|---------------------------------|------------------------------|-----------------------|---------------------------------|------------------------------|
| | AMOUNT | | SEASON OF DIVERSION | | AMOUNT | SEASON OF COLLECTION | |
| | Rate (cfs or gpd)* | Acre-feet per year | Beginning date (month & day) | Ending date (month & day) | Acre-feet per year | Beginning date (month & day) | Ending date (month & day) |
| Irrigation | | | | | 35 | 11-1 | 5-30 |
| Frost Protection | | | | | | | |
| Heat Control | | | | | | | |
| Incidental recreation and fire protection | | | | | | | |

☐ See Attachment No. _____

* If rate is less than 0.025 cubic feet per second (cfs), use gallons per day (gpd).

- b. Total combined amount taken by direct diversion and storage during any one year will be 35 acre-feet.
c. Reservoir storage is: ☒ onstream ☐ offstream ☐ underground (If underground storage, attach Form APP-UGSTOR.)
d. County in which diversion is located: Sonoma County in which water will be used: Sonoma
e. Assessor's Parcel Number(s): 029-070-39, 40, 63 and 29-110-51, 52, 53, 56

5. SOURCES AND POINTS OF DIVERSION/REDIVERSION

a. Sources and Points of Diversion (POD)/Points of Rediversion (PORD):

- ☒ POD / ☐ PORD # 1: unnamed stream tributary to Rincon Creek
thence Santa Rosa Creek thence Markwest Creek thence Russian River
☒ POD / ☐ PORD # 2: unnamed stream tributary to Rincon Creek
thence Santa Rosa Creek thence Markwest Creek thence Russian River
☐ POD / ☐ PORD # _____ tributary to _____
thence _____
☐ POD / ☐ PORD # _____ tributary to _____
thence _____

☐ See Attachment No. _____

b. State Planar and Public Land Survey Coordinate Description:

| POD/ PORD # | CALIFORNIA COORDINATES (NAD 27) | ZONE | POINT IS WITHIN (40-acre subdivision) | SECTION | TOWN- SHIP | RANGE | BASE AND MERIDIAN |
|-------------------|---------------------------------------|------|--|---------|---------------|-------|----------------------|
| 1 | N 305,131 E 1,802,712 | 2 | NW ¼ of NE ¼ | 36 | 8N | 8W | MD |
| 2 | N 305,150 E 1,801,450 | 2 | NW ¼ of NE ¼ | 36 | 8N | 8W | MD |
| | | | ¼ of ¼ | | | | |
| | | | ¼ of ¼ | | | | |

☐ See Attachment No. _____

- c. Name of the post office most often used by those living near the proposed point(s) of diversion:
Santa Rosa

6. WATER AVAILABILITY

- a. Have you attached a water availability analysis for this project? ☒ YES ☐ NO
If NO, provide sufficient information to demonstrate that there is reasonable likelihood that unappropriated water is available for the proposed appropriation:

☒ See Attachment No. 2

- b. Is your project located on a stream system declared to be fully appropriated by the State Water Resources Control Board during your proposed season of diversion? ☐ YES ☒ NO
- c. In an average year, does the stream dry up at any point downstream of your project? ☒ YES ☐ NO If YES, during which months? ☐ Jan ☐ Feb ☐ Mar ☒ Apr ☒ May ☒ Jun ☒ Jul ☒ Aug ☒ Sep ☒ Oct ☐ Nov ☐ Dec
- d. What alternate sources of water are available if a portion of your requested diversion season must be excluded because water is not available for appropriation? (e.g., percolating groundwater, purchased water, etc.)
Percolating groundwater

☐ See Attachment No. _____

7. PLACE OF USE

| USE IS WITHIN (40-acre subdivision) | SECTION* | TOWNSHIP | RANGE | BASE & MERIDIAN | IF IRRIGATED | |
|--|----------|----------|-------|--------------------|--------------|---|
| | | | | | Acres | Presently cultivated? |
| NW ¼ of NW ¼ | 36 | 8N | 8W | MD | 5 | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| NE ¼ of NW ¼ | 36 | 8N | 8W | MD | 27 | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| NW ¼ of NE ¼ | 36 | 8N | 8W | MD | 18 | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| NE ¼ of NE ¼ | 36 | 8N | 8W | MD | 14 | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| ¼ of ¼ | | | | | | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| ¼ of ¼ | | | | | | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| ¼ of ¼ | | | | | | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| ¼ of ¼ | | | | | | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| Total: | | | | | 64 | |

*Please indicate if section is projected with a "(P)" following the section number.

☐ See Attachment No. _____

8. PROJECT SCHEDULE

- a. Project is:
- ☐ proposed. Year construction will begin: _____
- ☒ partially complete. Extent of completion: The reservoir and approximately 40 acres of place of use is existing.
- ☐ complete. Year completed: _____
- b. Year of first use: 2002 Year water will be used to the full extent intended: 2015

SECTION B: MISCELLANEOUS DIVERSION INFORMATION

1. JUSTIFICATION OF AMOUNTS REQUESTED

- a. ☒ IRRIGATION: Maximum area to be irrigated in any one year: 64 acres.

| CROP | ACRES | METHOD OF IRRIGATION (sprinklers, flooding, etc.) | WATER USE (Acre-feet/Yr.) | SEASON OF WATER USE | |
|----------|-------|--|------------------------------|---------------------------------|------------------------------|
| | | | | Beginning date (month & day) | Ending date (month & day) |
| Vineyard | 64 | Drip | 35 | 4-15 | 10-15 |
| | | | | | |
| | | | | | |
| | | | | | |

☐ See Attachment No. _____

- b. ☐ DOMESTIC: Number of residences to be served: _____ Separately owned? ☐ YES ☐ NO
 Number of people to be served: _____ Estimated daily use per person is: _____ gallons per day
 Area of domestic lawns and gardens: _____ square feet
 Incidental domestic uses: _____
 (dust control area, number and kind of domestic animals, etc.)

- c. ☐ STOCKWATERING: Kind of stock: _____ Maximum number: _____
 Describe type of operation: _____
 (feedlot, dairy, range, etc.)

- d. ☒ RECREATIONAL: Type of recreation: ☒ Fishing ☒ Swimming ☐ Boating ☐ Other _____
 Incidental

- e. ☐ MUNICIPAL:

| POPULATION | | MAXIMUM MONTH | | ANNUAL USE | | |
|--|------------|---|----------------------------|---|---------------------------|----------------------|
| List for 5-year periods until use is completed | | Average daily use (gallons per capita) | Rate of diversion (cfs) | Average daily use (gallons per capita) | Acre-foot (per capita) | Total (acre-feet) |
| Period | Population | | | | | |
| Present | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

☐ See Attachment No. _____

Month of maximum use during year: _____ Month of minimum use during year: _____

- f. ☐ HEAT CONTROL: Area to be heat controlled: 64 net acres
 Type of crops protected: vineyard
 Rate at which water is applied to use: 35 gpm per acre
 Heat protection season will begin 6-1 and end 8-31
 (month & day) (month & day)

- g. ☐ FROST PROTECTION: Area to be frost protected: 64 net acres
 Type of crops protected: vineyard
 Rate at which water is applied to use: 55 gpm per acre
 The frost protection season will begin 3-1 and end 5-31
 (month & day) (month & day)

- h. ☐ INDUSTRIAL: Type of industry: _____
 Basis for determination of amount of water needed: _____

- i. ☐ MINING: Name of the claim: _____ ☐ Patented ☐ Unpatented
 Nature of the mine: _____ Mineral(s) to be mined: _____
 Type of milling or processing: _____
 After use, the water will be discharged into _____ (watercourse)
 in _____ 1/4 of _____ 1/4 of Section _____, T _____, R _____, _____ B. & M.

- j. ☐ POWER: Total head to be utilized: _____ feet
 Maximum flow through the penstock: _____ cfs
 Maximum theoretical horsepower capable of being generated by the works (cfs x fall + 8.8): _____
 Electrical capacity (hp x 0.746 x efficiency): _____ kilowatts at: _____ % efficiency
 After use, the water will be discharged into _____ (watercourse)
 in _____ 1/4 of _____ 1/4 of Section _____, T _____, R _____, _____ B. & M. FERC No.: _____

- k. ☐ FISH AND WILDLIFE PRESERVATION AND/OR ENHANCEMENT: List specific species and habitat type that will be preserved or enhanced in Item 7a of Section C.

- l. ☒ OTHER: Describe use: Incidental fire protection
 Basis for determination of amount of water needed: _____

2. DIVERSION AND DISTRIBUTION METHOD

- a. Diversion will be by gravity by means of: #1 Dam, #2 Drop inlet
(dam, pipe in unobstructed channel, pipe through dam, siphon, weir, gate, etc.)
- b. Diversion will be by pumping from: _____
(sump, offset well, channel, reservoir, etc.)
- Pump discharge rate: _____ ☐ cfs or ☐ gpd Horsepower: _____ Pump Efficiency: _____

c. Conduit from diversion point to first lateral or to offstream storage reservoir:

| CONDUIT (pipe or channel) | MATERIAL (type of pipe or channel lining; indicate if pipe is buried or not) | CROSS-SECTION (pipe diameter, or ditch depth and top and bottom width) (inches or feet) | LENGTH (feet) | TOTAL LIFT OR FALL | | CAPACITY (cfs, gpd or gpm) |
|------------------------------|---|--|------------------|--------------------|--------|-------------------------------|
| | | | | feet | + or - | |
| Ditch | Earth | 4' x 1' | 300' | 10 | — | 5 cfs |
| | | | | | | |
| | | | | | | |

☐ See Attachment No. _____

d. Storage reservoirs: (For underground storage, complete and attach form APP-UGSTOR)

| RESERVOIR NAME OR NUMBER | DAM | | | | RESERVOIR | | |
|--------------------------|---|-----------------------|---------------|---|--------------------------------|----------------------|----------------------------|
| | Vertical height from downstream toe of slope to spillway level (feet) | Construction material | Length (feet) | Freeboard: dam height above spillway crest (feet) | Surface area when full (acres) | Capacity (acre-feet) | Maximum water depth (feet) |
| 1 | 21 | Earth | 400' | 5' | 2.5 | 35 | 20' |
| | | | | | | | |
| | | | | | | | |

☐ See Attachment No. _____

e. Outlet pipe: Complete for storage reservoirs having a capacity of 10 acre-feet or more.

| RESERVOIR NAME OR NUMBER | OUTLET PIPE | | | | |
|--------------------------|-------------------|---------------|---|---|---|
| | Diameter (inches) | Length (feet) | Fall: vertical distance between entrance and exit of outlet pipe (feet) | Head: vertical distance from spillway to entrance of outlet pipe (feet) | Dead Storage: storage below entrance of outlet pipe (acre-feet) |
| Reservoir is existing. | | | Dewatering will | be accomplished | by pumping. |
| | | | | | |
| | | | | | |

☐ See Attachment No. _____

- f. If water will be stored and the reservoir is not at the point of diversion, the maximum rate of diversion to offstream storage will be 5 cfs. Diversion to offstream storage will be made by: ☐ Pumping ☒ Gravity

3. CONSERVATION AND MONITORING

- a. What methods will you use to conserve water? Explain. Drip irrigation
- _____
- _____
- b. How will you monitor your diversion to be sure you are within the limits of your water right and you are not wasting water? ☐ Weir ☒ Meter ☐ Periodic sampling ☒ Other (describe) Staff gage in reservoir
- _____
- _____

4. RIGHT OF ACCESS

- a. Does the applicant own all the land where the water will be diverted, transported and used? ☒ YES ☐ NO
If NO, I ☐ do ☐ do not have a recorded easement or written authorization allowing me access.
- b. List the names and mailing addresses of all affected landowners and state what steps are being taken to obtain access: _____
- _____

☐ See Attachment No. _____

5. EXISTING WATER RIGHTS AND RELATED FILINGS

- a. Do you claim an existing right for the use of all or part of the water sought by this application? ☐ YES ☒ NO
If YES, please specify: ☐ Riparian ☐ Pre-1914 ☐ Registration ☐ Permit ☐ License
☐ Percolating groundwater ☐ Adjudicated ☐ Other (specify) _____
- b. For each existing right claimed, state the source, year of first use, purpose, season and location of the point of diversion (to within quarter-quarter section). Include number of registration, permit, license, or statement of

water diversion and use, if applicable. _____

- c. List any related applications, registrations, permits, or licenses located in the proposed place of use or that utilize the same point(s) of diversion? _____

☐ See Attachment No. _____

6. OTHER SOURCES OF WATER

Are you presently using, or do you intend to use, purchased water or water supplied by contract in connection with this project? ☐ Yes ☒ No If yes, please explain: _____

7. MAP REQUIREMENTS

The Division cannot process your application without accurate information showing the source of water and location of water use. You must include a map with this application form that clearly indicates the township, range, section and quarter/quarter section of (1) the proposed points of diversion and (2) the place of use. A copy of a U.S.G.S. quadrangle/topographic map of your project area is preferred, and can be obtained from sporting goods stores or through the Internet at <http://topomaps.usgs.gov>. A certified engineering map is required when (1) appropriating more than three cfs by direct diversion, (2) constructing a dam which will be under the jurisdiction of the Division of Safety of Dams, (3) creating a reservoir with a surface area in excess of ten acres or (4) appropriating more than 1000 acre-feet per annum by underground storage. See the instruction booklet for more information.

☒ See Attachment No. 3

SECTION C: ENVIRONMENTAL INFORMATION

Note: Before a water right permit may be issued for your project, the State Water Resources Control Board (SWRCB) must consider the information contained in an environmental document prepared in compliance with the California Environmental Quality Act (CEQA). This form is not a CEQA document. If a CEQA document has not yet been prepared for your project, a determination must be made of who is responsible for its preparation. If the SWRCB is determined to be responsible for preparing the CEQA document, the applicant will be required to pay all costs associated with the environmental evaluation and preparation of the required documents. Please answer the following questions to the best of your ability and submit with this application any studies that have been conducted regarding the environmental evaluation of your project.

1. COUNTY PERMITS

- a. Contact your county planning or public works department and provide the following information:

Person contacted: Sonoma County Date of contact: 5-24-06
Department: Planning Dept. Telephone: (707) 565-1900
County Zoning Designation: All parcels - DA B7 5R

Are any county permits required for your project? ☐ YES ☒ NO If YES, check appropriate box below:

☐ Grading permit ☐ Use permit ☐ Watercourse ☐ Obstruction permit ☐ Change of zoning
☐ General plan change ☐ Other (explain): _____

- b. Have you obtained any of the required permits described above? ☐ YES ☐ NO

If YES, provide a complete copy of each permit obtained.

☐ See Attachment No. _____

2. STATE/FEDERAL PERMITS AND REQUIREMENTS

- a. Check any additional state or federal permits required for your project:

☐ Federal Energy Regulatory Commission ☐ U.S. Forest Service ☐ U.S. Bureau of Land Management
☐ U.S. Corps of Engineers ☐ U.S. Natural Res. Conservation Service ☐ Calif. Dept. of Fish and Game
☐ State Lands Commission ☐ Calif. Dept. of Water Resources (Div. of Safety of Dams)
☐ Calif. Coastal Commission ☐ State Reclamation Board ☐ Other (specify) _____

- b. For each agency from which a permit is required, provide the following information:

| AGENCY | PERMIT TYPE | PERSON(S) CONTACTED | CONTACT DATE | TELEPHONE NO. |
|--------|-------------|---------------------|--------------|---------------|
| | | | | |
| | | | | |
| | | | | |

☐ See Attachment No. _____

- c. Does your proposed project involve any construction or grading-related activity that has significantly altered or would significantly alter the bed, bank, or riparian habitat of any stream or lake? ☐ YES ☒ NO
If YES, explain: _____

☐ See Attachment No. _____

- d. Have you contacted the California Department of Fish and Game concerning your project? ☐ YES ☒ NO
If YES, name and telephone number of contact: _____

3. ENVIRONMENTAL DOCUMENTS

- a. Has any California public agency prepared an environmental document for your project? ☐ YES ☒ NO
c. If YES, submit a copy of the latest environmental document(s) prepared, including a copy of the notice of determination adopted by the California public agency. Public agency: _____
d. If NO, check the appropriate box and explain below, if necessary:
☐ The applicant is a California public agency and will be preparing the environmental document.*
☒ I expect that the SWRCB will be preparing the environmental document.**
☐ I expect that a California public agency other than the State Water Resources Control Board will be preparing the environmental document.* Public agency: _____
☐ See Attachment No. _____

* Note: When completed, submit a copy of the final environmental document (including notice of determination) or notice of exemption to the SWRCB, Division of Water Rights. Processing of your application cannot proceed until these documents are submitted.

** Note: CEQA requires that the SWRCB, as Lead Agency, prepare the environmental document. The information contained in the environmental document must be developed by the applicant and at the applicant's expense under the direction of the SWRCB, Division of Water Rights.

4. WASTE/WASTEWATER

- a. Will your project, during construction or operation, (1) generate waste or wastewater containing such things as sewage, industrial chemicals, metals, or agricultural chemicals, or (2) cause erosion, turbidity or sedimentation? ☐ YES ☒ NO
If YES, or you are unsure of your answer, explain below and contact your local Regional Water Quality Control Board for the following information (See instruction booklet for address and telephone no.):

☐ See Attachment No. _____

- b. Will a waste discharge permit be required for your project? ☐ YES ☒ NO
Person contacted: _____ Date of contact: _____
c. What method of treatment and disposal will be used? _____

☐ See Attachment No. _____

5. ARCHEOLOGY

- a. Have any archeological reports been prepared on this project? ☐ YES ☒ NO
b. Will you be preparing an archeological report to satisfy another public agency? ☐ YES ☒ NO
c. Do you know of any archeological or historic sites located within the general project area? ☐ YES ☒ NO
If YES, explain: _____

☐ See Attachment No. _____

6. ENVIRONMENTAL SETTING

Attach **three complete sets of color photographs**, clearly dated and labeled, showing the vegetation that exists at the following three locations:

- ☒ Along the stream channel immediately downstream from the proposed point(s) of diversion.
☒ Along the stream channel immediately upstream from the proposed point(s) of diversion.
☒ At the place(s) where the water is to be used.
☒ See Attachment No. 4

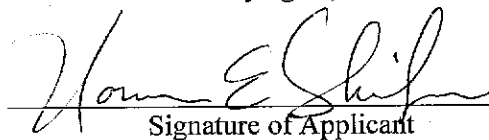
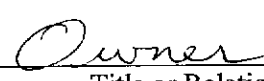
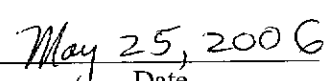
SECTION D: SUBMITTAL FEES

Calculate your application filing fee using the "Water Right Fee Schedule Summary" that was enclosed in the application packet. The "Water Right Fee Schedule Summary" can also be viewed at the Division of Water Rights' website (www.waterrights.ca.gov).

A check for the application filing fee, payable to the "Division of Water Rights" and an \$850 check for the environmental review fee, payable to the "California Department of Fish and Game," must accompany this application. All applicable fees are required at the time of filing. Your application will be returned to you if it is not accompanied by all required fees.

SECTION E: DECLARATION AND SIGNATURE

I declare under penalty of perjury that all information provided is true and correct to the best of my knowledge and belief. I authorize my agent, if I have designated one above, to act on my behalf regarding this water right application.

| | | |
|---|--|---|
|  |  |  |
| Signature of Applicant | Title or Relationship | Date |

| | | |
|---|--------------------------------|---------------|
| _____ Signature of Co-Applicant (if any) | _____ Title or Relationship | _____ Date |
|---|--------------------------------|---------------|



"APPLICATION TO APPROPRIATE WATER" CHECKLIST

Before you submit your application, be sure to:

- ☐ Answer each question completely in Sections A, B, and C.
- ☐ Number and include all necessary attachments.
- ☐ Include a legible map that meets the requirements discussed in the instruction booklet (Item B6).
- ☐ Include the Water Availability Analysis or sufficient information to demonstrate that there is reasonable likelihood that unappropriated water is available for the proposed appropriation (Item A6).
- ☐ Include three complete sets of color photographs of the project site (Item C6).
- ☐ Enclose a check for the required fee, payable to the Division of Water Rights, as specified in Section D.
- ☐ Enclose a \$850 check for the environmental review fee, payable to the Department of Fish and Game, as specified in Section D.
- ☐ Sign and date the application in Section E.

Send the original and one copy of the entire application to:

State Water Resources Control Board
Division of Water Rights
P.O. Box 2000
Sacramento, CA 95812-2000

Attachment to Accompany
Water Right Application
Norm Shinabargar

Attachment #1

3. Project Description

92807
5000

This project consists of storage of water in one existing onstream reservoir, having a capacity of 35 acre-feet, located on the Applicant's property. Water will be used for irrigation, heat control and frost protection of approximately 40 acres of existing vineyard and approximately 24 acres of proposed vineyard. The reservoir was built in late 1950's and stores water from its naturally tributary area. The reservoir also receives water from the adjacent watershed collected in an existing drop inlet at Point of Diversion #2. ~~Water will also be used for incidental recreation and fire protection purposes at the reservoir.~~

The existing vineyard was planted in 1972 and is currently irrigated by a groundwater well and frost protected from the reservoir. The property has historically been farmed since the early 1900's.

The reservoir and 40 acres of vineyard are in place and are located in areas that were historically cleared. The 24 acres of proposed vineyard and associated water transfer lines will be developed in naturally cleared areas (see attached photographs).

ATTACHMENT 2

**Estimate of Water Availability to Accompany Water Right Application
by Norm Shinabarger**

California Water Code Section 1260(k) requires that every application for a permit to appropriate water shall include "sufficient information to demonstrate a reasonable likelihood that unappropriated water is available for the proposed appropriation." This narrative and accompanying calculations provide the required information.

The subject Application is within the watershed of Rincon Creek tributary to Santa Rosa Creek thence Mark West Creek thence the Russian River in Sonoma County (see attached map). According to State Water Resources Control Board Order WR 98-08, the Santa Rosa Creek watershed is fully appropriated from June 1 to October 31. The Application proposes a diversion season of November 1 to May 30, which conforms to Order WR 98-08. The following describes the methodology used to demonstrate a *reasonable* likelihood that water is physically available for the proposed appropriation.

The attached map shows the proposed points of diversion and the watershed areas tributary thereto. The map also shows lines of equal mean annual runoff as shown on the map included with the document entitled *Mean Annual Runoff in the San Francisco Bay Region, California, 1931-70* by S.E. Rantz, 1974.¹ An excerpt of this map is attached (Rantz map).

The weighted mean annual runoff for the watersheds tributary to the proposed points of diversion was computed based on the Rantz map. Mean *seasonal* runoff for the subject watersheds was estimated by adjusting the mean annual runoff assuming that the ratio of seasonal to annual runoff is identical to the ratio of seasonal to annual mean precipitation. The Santa Rosa precipitation station was used for this purpose. The resulting seasonal runoff value was adjusted by deducting the *face value* of any senior water rights in the watershed above the proposed points of diversion.

Calculations for the foregoing methodology are attached. These calculations show that in an average year runoff of approximately 183 acre-feet would occur at the points of diversion during the proposed season of diversion. The diversion of 35 acre-feet would leave about 148 acre-feet of runoff remaining during the proposed diversion season. Accordingly, it is reasonable to conclude that water is available for the subject Application.

SHINB006.doc

¹ USGS Miscellaneous Field Studies Map MF-613, prepared in cooperation with the California Department of Water Resources.

Water Right Application by Norm Shinabarger

Estimate of Water Availability

Points of Diversion #1 & #2

Monthly Precipitation⁽¹⁾

SANTA ROSA, CALIFORNIA

| <u>Month</u> | <u>Mean Precipitation (in)</u> |
|---------------|--------------------------------|
| October | 1.72 |
| November | 3.79 |
| December | 5.64 |
| January | 6.18 |
| February | 5.21 |
| March | 4.13 |
| April | 2.07 |
| May | 0.89 |
| June | 0.28 |
| July | 0.03 |
| August | 0.10 |
| September | 0.33 |
| Annual | 30.37 |

| | |
|---|----------|
| Mean precipitation for requested diversion season (11/1 - 5/31): | 27.91 in |
| Precipitation during requested diversion season as a percentage of total precipitation: | 91.90% |
| Mean Annual Runoff: ⁽²⁾ | 16.7 in |
| Estimated Mean Seasonal Runoff: ⁽³⁾ | 15.3 in |
| Watershed Area for PODs #1 and #2: | 143.1 ac |

| | |
|--|-------------|
| Total Estimated Mean Seasonal Runoff at PODs #1 & #2: | 182.5 ac-ft |
| Senior Diverters of Record within PODs #1 & #2 watershed: | n/a |
| Total water available: | 182.5 ac-ft |
| Requested diversion amount: | 35.0 ac-ft |
| Total Seasonal Amount Remaining in Stream After Diversion: | 147.5 ac-ft |

Notes:

⁽¹⁾ Source: Western Regional Climate Center website, <http://www.wrcc.dri.edu/summary/climsmnca.html>

⁽²⁾ *Mean Annual Runoff in the San Francisco Bay Region, California, 1931-70 (Miscellaneous Field Studies Map MF-613)*, by S.E. Rantz, 1974.

⁽³⁾ Estimated mean seasonal runoff is computed by multiplying mean annual runoff by percent seasonal precipitation.

Norm Shinabarger
Calculation of Weighted Mean Annual Runoff in POD Watersheds

| Watershed | Area (ac) | Mean Annual Runoff (in) | Volume (ac-in) | Volume (ac-ft) |
|-------------------------|----------------------|------------------------------------|---------------------------|---------------------------|
| POD 1 & 2 | 119.9 | 16.6 | 1,990 | 166 |
| | <u>23.2</u> | 17.1 | <u>397</u> | <u>33</u> |
| Total | 143.1 | | 2,387 | 199 |
| Weighted Average | | 16.7 | | |

SANTA ROSA, CALIFORNIA
Monthly Total Precipitation (inches)
-47965

File last updated on May 4, 2006

*** Note *** Provisional Data *** After Year/Month 200601

a = 1 day missing, b = 2 days missing, c = 3 days, ..etc.,

z = 26 or more days missing, A = Accumulations present

Long-term means based on columns; thus, the monthly row may not
sum (or average) to the long-term annual value.

MAXIMUM ALLOWABLE NUMBER OF MISSING DAYS : 5

Individual Months not used for annual or monthly statistics if more than 5 days are missing.

Individual Years not used for annual statistics if any month in that year has more than 5 days missing.

| WY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANN |
|------|--------|--------|--------|--------|-------|------|--------|------|------|------|------|------|-------|
| 1931 | | | | 3.48 e | 1.87 | 2.94 | 0.49 | 0.9 | 0.67 | 0 | 0 | 0 | - |
| 1932 | 1.4 | 2.27 | 11.29 | 3.45 | 1.49 | 1.21 | 1.43 | 1.65 | 0 | 0 | 0 | 0 | 24.19 |
| 1933 | 0.08 | 1.69 | 4.06 | 6.4 | 1.51 | 4.64 | 0.12 | 2.23 | 0 | 0.02 | 0 | 0.17 | 20.92 |
| 1934 | 2.02 | 0 | 8.14 | 1.75 | 4.69 | 1.13 | 0.73 | 1.39 | 1 | 0 | 0 | 0.03 | 20.88 |
| 1935 | 2.28 | 5.19 | 3.45 | 7.36 | 3.5 | 6.31 | 6.87 | 0 | 0 | 0 | 0.12 | 0.23 | 35.31 |
| 1936 | 1.02 | 1.47 | 2.95 a | 7.77 | 11.81 | 1.58 | 1.86 | 0.61 | 0.8 | 0 | 0.03 | 0 | 29.9 |
| 1937 | 0.22 | 0.02 | 2.9 | 4.92 | 8.59 | 6.31 | 1.87 | 0.19 | 1.28 | 0.05 | 0 | 0 | 26.35 |
| 1938 | 1.06 | 7.46 a | 5.4 | 4.77 | 9.66 | 8.03 | 2.45 | 0.06 | 0 | 0.02 | 0 | 0.38 | 39.29 |
| 1939 | 2.18 | 2.22 | 2.14 | 3.36 | 1.61 | 2.41 | 0.14 | 1.12 | 0 | 0 | 0 | 0.08 | 15.26 |
| 1940 | 0.52 | 0.46 | 2.88 | 10.87 | 12.31 | 7.14 | 1.84 | 1.96 | 0.07 | 0 | 0 | 0.5 | 38.55 |
| 1941 | 1.82 | 2.59 | 13.56 | 11.02 | 8.22 | 5.59 | 6.71 | 1.84 | 0.3 | 0 | 0 | 0.13 | 51.78 |
| 1942 | 1.53 | 3.58 | 9.12 | 6.5 | 8.65 | 3.78 | 5.58 | 1.67 | 0 | 0.02 | 0 | 0.15 | 40.58 |
| 1943 | 1.23 | 5.75 | 5.8 | 9.28 | 2.73 | 4.85 | 2.67 | 0.05 | 0 | 0.03 | 0 | 0 | 32.39 |
| 1944 | 0.68 | 1.16 | 2.38 | 5.07 | 7.66 | 2.25 | 2.15 | 1.58 | 0.28 | 0 | 0 | 0.02 | 23.23 |
| 1945 | 2.45 | 5.9 | 4.22 | 3.13 | 4.92 | 5.82 | 0.33 | 1.39 | 0 | 0 | 0 | 0 | 28.16 |
| 1946 | 2.91 | 4.23 | 10.37 | 2.32 | 2.98 | 2.2 | 0.1 | 0.47 | 0 | 0.2 | 0 | 0.06 | 25.84 |
| 1947 | 0.28 | 4.08 | 3.66 | 0.76 | 3.82 | 4.94 | 0.65 | 0.4 | 1.63 | 0 | 0 | 0 | 20.22 |
| 1948 | 5.28 | 1.55 | 1.22 | 4.18 | 1.51 | 5.57 | 7.61 | 1.03 | 0.25 | 0.06 | 0 | 0.13 | 28.39 |
| 1949 | 0.85 | 1.87 | 4.67 | 1.39 | 3.32 | 6.83 | 0.08 | 0.74 | 0 | 0.05 | 0.04 | 0.02 | 19.86 |
| 1950 | 0.02 | 2.12 | 2.79 | 10.12 | 5.15 | 3.29 | 1.31 | 0.56 | 0.06 | 0 | 0 | 0 | 25.42 |
| 1951 | 3.46 | 7.19 | 9.38 | 5.14 | 2.84 | 1.25 | 1.27 | 1.48 | 0 | 0 | 0.01 | 0.04 | 32.06 |
| 1952 | 2.68 | 6.26 | 8.01 | 10.19 | 2.88 | 4.62 | 0.84 | 0.57 | 1.38 | 0.04 | 0 | 0.05 | 37.52 |
| 1953 | 0.08 | 2.73 | 14.72 | 6.74 | 0.08 | 3.17 | 3.91 | 0.57 | 0.97 | 0 | 0.17 | 0 | 33.14 |
| 1954 | 1.31 | 4.15 j | 0.96 | 7.8 | 3.19 | 5.74 | 3.23 | 0.37 | 0.26 | 0 | 1.35 | 0 | 28.36 |
| 1955 | 0.9 | 5.64 | 4.43 | 3.63 | 1.22 | 0.6 | 3.68 | 0.01 | 0 | 0 | 0 | 0.45 | 20.56 |
| 1956 | 0.51 | 3.28 | 17.89 | 11.78 | 6.15 | 0.31 | 2.48 | 1.28 | 0.1 | 0 | 0 | 0.17 | 43.95 |
| 1957 | 2.28 | 0.23 | 0.38 | 3.85 | 5.57 | 2.49 | 2.32 | 3.93 | 0.08 | 0 | 0 | 2.16 | 23.29 |
| 1958 | 6.16 | 0.93 | 3.99 | 7.18 | 11.94 | 6.87 | 5.43 | 0.45 | 0.44 | 0.01 | 0.01 | 0.03 | 43.44 |
| 1959 | 0.15 | 0.29 | 1.96 | 7.75 | 6.24 | 1.6 | 0.25 | 0.16 | 0 | 0 | 0 | 3.16 | 21.56 |
| 1960 | 0.14 | 0.08 | 1.8 | 5.65 | 8.46 | 6.05 | 1.38 | 0.8 | 0 a | 0 | 0 | 0.01 | 24.37 |
| 1961 | 0.71 d | 3.81 | 4.5 | 5.22 | 3.29 | 4.6 | 1.07 | 0.77 | 0.16 | 0 | 0.03 | 0.57 | 24.73 |
| 1962 | 0.17 | 2.88 | 3.93 c | 2.02 | 8.79 | 4.34 | 0.51 a | 0.06 | 0 | 0 | 0.08 | 0.36 | 23.14 |
| 1963 | 9.47 | 0.95 | 4.64 | 3.75 | 4.22 | 4.94 | 6.57 | 0.66 | 0 | 0 | 0.01 | 0.09 | 35.3 |
| 1964 | 2.61 | 7.53 | 0.81 | 5.19 | 0.33 | 1.97 | 0.33 | 0.4 | 1.1 | 0 | 0.02 | 0 | 20.29 |
| 1965 | 2.31 | 6.12 | 8.64 | 6.63 | 1.24 | 0.97 | 5.04 | 0 | 0 | 0.01 | 0.5 | 0 z | - |
| 1966 | 0.23 | 6.11 | 3.74 | 8.62 | 3.3 | 0.97 | 1.31 | 0.21 | 0.13 | 0 | 0.12 | 0.35 | 25.09 |

| | | | | | | | | | | | | | |
|------|-------|--------|--------|-------|--------|-------|------|------|--------|------|------|------|-------|
| 1967 | 0.01 | 7.61 | 6.55 | 12.42 | 0.58 | 5.86 | 6.72 | 0.17 | 1.94 | 0 | 0 | 0.07 | 41.93 |
| 1968 | 0.86 | 2.68 | 4.01 | 7.63 | 4.82 | 4.2 | 0.48 | 0.26 | 0 | 0 | 1.68 | 0.02 | 26.64 |
| 1969 | 2.07 | 3.39 | 9.09 | 13.25 | 8.23 | 1.79 | 3.23 | 0.03 | 0.04 | 0 | 0 | 0.03 | 41.15 |
| 1970 | 2.42 | 1.19 | 11.79 | 15.89 | 3.17 | 3.44 | 0.07 | 0 | 0.44 | 0 | 0 | 0 | 38.41 |
| 1971 | 2.24 | 8.97 | 10.78 | 3.13 | 0.19 | 4.05 | 1.22 | 0.24 | 0.05 | 0 | 0.03 | 0.34 | 31.24 |
| 1972 | 0.49 | 2.39 | 5.49 | 1.89 | 3.49 | 1.02 | 1.79 | 0.09 | 0.13 | 0.05 | 0.11 | 0.66 | 17.6 |
| 1973 | 3.47 | 6.87 | 5.12 | 15.38 | 7.17 | 3.48 | 0.65 | 0.03 | 0 | 0 | 0 | 0.74 | 42.91 |
| 1974 | 2.37 | 13.23 | 5.33 | 6.48 | 3.54 | 6.67 | 2.87 | 0.09 | 0 | 1.61 | 0 | 0 | 42.19 |
| 1975 | 1.27 | 1.2 | 3.8 | 1.98 | 9.88 | 7.84 | 1.71 | 0.02 | 0.1 | 0 | 0.21 | 0.02 | 28.03 |
| 1976 | 6.44 | 1.58 | 0.89 | 0.39 | 2.61 | 0.92 | 2.62 | 0 | 0.03 | 0 | 0.78 | 0.66 | 16.92 |
| 1977 | 0.46 | 1.76 | 1.15 | 2.01 | 1.93 | 2.65 | 0.23 | 1.43 | 0 | 0 | 0 | 1.16 | 12.78 |
| 1978 | 0.65 | 0.03 | 5.22 | 9.81 | 2.44 d | 0 z | 2.29 | 0.08 | 0 | 0 | 0 | 1.38 | - |
| 1979 | 0 | 0 z | 0.41 | 0 z | 0 z | 0 z | 0 z | 0 z | 0 z | 0.01 | 0 | 0.09 | - |
| 1980 | 4.14 | 5.99 | 7.71 | 7.09 | 8.82 | 1.52 | 2 | 0.19 | 0.27 | 0 | 0 | 0 | 37.73 |
| 1981 | 0.38 | 0.5 | 6.6 a | 7.81 | 2.6 | 3.58 | 0.2 | 0.63 | 0 | 0.02 | 0 | 0.24 | 22.56 |
| 1982 | 2.76 | 8.91 | 11.29 | 8.72 | 5.23 | 6.5 | 4 | 0 | 0.03 | 0 | 0 | 0.97 | 48.41 |
| 1983 | 4.3 a | 8.44 | 3.61 | 8.39 | 9.83 | 15.74 | 3.46 | 0.92 | 0 | 0 | 0.75 | 0.24 | 55.68 |
| 1984 | 1.2 | 11.21 | 11.33 | 0.65 | 2.45 | 2.25 | 1.18 | 0.11 | 0.13 | 0 | 0.17 | 0.09 | 30.77 |
| 1985 | 2.36 | 10.92 | 2.6 | 1.87 | 3.01 | 4.61 | 0.2 | 0.04 | 0.02 | 0.03 | 0 | 1.18 | 26.84 |
| 1986 | 1.4 | 4.5 | 3.72 | 6.64 | 15.94 | 5.9 | 0.83 | 0.82 | 0 | 0 | 0 | 2.75 | 42.5 |
| 1987 | 0.55 | 0.2 | 2.65 | 5.01 | 5.45 a | 4.83 | 0.16 | 0.08 | 0.01 | 0.01 | 0 | 0 | 18.95 |
| 1988 | 1.37 | 4.45 | 6.11 a | 6.99 | 0.4 | 0.02 | 1.53 | 0.73 | 0.49 | 0 | 0 | 0 | 22.09 |
| 1989 | 0.11 | 4.89 | 4.07 | 1.47 | 1.53 a | 10.22 | 1.22 | 0.13 | 0.22 | 0 | 0.04 | 2.72 | 26.62 |
| 1990 | 2.65 | 1.71 | 0 | 5.74 | 3.27 | 2.03 | 0.24 | 5.46 | 0.01 | 0 | 0 | 0.27 | 21.38 |
| 1991 | 0.62 | 0.44 | 1.16 | 0.75 | 4.72 | 13.74 | 0.33 | 0.13 | 0.72 | 0 | 0.05 | 0.01 | 22.67 |
| 1992 | 1.74 | 1.15 | 2.91 | 2.03 | 9.34 | 4.69 | 1.64 | 0 | 0.79 | 0 | 0 | 0 | 24.29 |
| 1993 | 3.65 | 0.31 | 8.73 | 11.48 | 5.58 b | 3.44 | 1.6 | 1.43 | 1.06 | 0 | 0 | 0 | 37.28 |
| 1994 | 3.06 | 3.39 a | 3.94 | 3.38 | 4.8 | 0.34 | 1.56 | 0.89 | 0 | 0.02 | 0 | 0.01 | 21.39 |
| 1995 | 1.02 | 7.21 | 3.37 a | 17.08 | 1.54 | 11.52 | 3.01 | 1.78 | 0.76 | 0 | 0 | 0 | 47.29 |
| 1996 | 0 | 0.41 | 9.38 | 8.94 | 9.43 | 2.58 | 3.89 | 3.69 | 0 | 0 | 0 | 0.05 | 38.37 |
| 1997 | 0.89 | 3.47 | 11.83 | 11.4 | 0.86 | 1.37 | 1.28 | 0.87 | 0.42 | 0 | 1.01 | 0.46 | 33.86 |
| 1998 | 1.48 | 7.42 | 3.29 | 10.7 | 19.42 | 3.89 | 0 z | 4.04 | 0 | 0 | 0 | 0.05 | - |
| 1999 | 1.06 | 5.88 | 1.35 | 5.12 | 12.37 | 4.29 | 2.13 | 0.13 | 0.15 | 0 | 0 | 0.17 | 32.65 |
| 2000 | 0.99 | 3.59 | 0.7 | 5.44 | 11.65 | 3.07 | 0 z | 0 z | 0.25 | 0 | 0.01 | 0.54 | - |
| 2001 | 3.45 | 1.65 | 0.86 | 5.27 | 5.94 | 0 z | 0 z | 0 z | 0.48 | 0 | 0 | 0.13 | - |
| 2002 | 0.96 | 9 | 11.49 | 5.02 | 1.84 | 2.43 | 0.64 | 1.13 | 0 | 0 | 0 | 0 | 32.51 |
| 2003 | 0 | 3.48 | 16.18 | 3.7 | 2.18 | 2.81 | 4.89 | 1.48 | 0.05 | 0.03 | 0.01 | 0.07 | 34.88 |
| 2004 | 0.04 | 3.22 | 11.42 | 3.44 | 9.24 | 1.14 | 0.68 | 0.03 | 0 | 0.02 | 0.01 | 0.11 | 29.35 |
| 2005 | 3.27 | 1.81 | 10.46 | 4.12 | 4.29 | 5.75 | 1.61 | 5.55 | 0.95 a | 0 | 0.02 | 0 | 37.83 |

1931-2005 Period of Record Statistics

| | | | | | | | | | | | | | |
|--------|------|-------|-------|-------|-------|-------|------|------|------|------|------|------|-------|
| MEAN | 1.72 | 3.79 | 5.64 | 6.18 | 5.21 | 4.13 | 2.07 | 0.89 | 0.28 | 0.03 | 0.10 | 0.33 | 30.43 |
| MAX | 9.47 | 13.23 | 17.89 | 17.08 | 19.42 | 15.74 | 7.61 | 5.55 | 1.94 | 1.61 | 1.68 | 3.16 | 55.68 |
| MIN | 0.00 | 0.00 | 0.00 | 0.39 | 0.08 | 0.02 | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 12.78 |
| NO YRS | 75 | 73 | 75 | 75 | 75 | 73 | 72 | 72 | 74 | 75 | 75 | 74 | 68 |

